59480

ROUTING AND TRANSMITTAL SLIP Date 11/15/89

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1.	Frank Vavra, ~~3E~~ 3HW17		
2.			
3.			
4.			
5.			

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

MEMORANDUM

DATE: 15 NOV 1989

SUBJECT: Review of Remedial Investigation/Feasibility Study (RI/FS) for Hunterstown Road Site

FROM: Linda Holst Linda Holst
Program Support Branch (3WM10)

TO: Frank Vavra
SARA Special Sites Section (3HW17)

I have reviewed the subject RI/FS report for surface water quality concerns. My specific comments are listed below.

Comments

1. Impacts to aquatic biota were not investigated. It is suggested that biological surveys (fish and macroinvertebrate) be conducted as well as aquatic toxicity testing with ambient water samples.

2. Concentrations of compounds detected in surface water samples should be compared to EPA's as well as Pennsylvania's freshwater aquatic life and human health criteria. (The report seems to only use EPA's chronic aquatic life criteria). In many cases, chronic aquatic life and human health criteria are being exceeded. (See attachment 1).

3. Many of the detection limits used for water samples exceed EPA and/or Pennsylvania aquatic life and/or human health criteria. Concentrations of these compounds may be exceeding criteria, even though they are not detected. (See attachment 2).

4. It should be investigated as to whether the form of chromium detected in the water samples is trivalent or hexavalent. Hexavalent chromium is much more toxic to both aquatic life and humans.

5. In Table 1-4, what compound is PCE?

6. In Table 1-4, why are there different detection limits for the same pollutants for sample taken on 10/21/85 (e.g., chloromethane: 2ppb at pond vs. 20 ppb at West Stream)?

Attachments

Attachment 1

Ambient Water Sample Concentrations which Exceed Pennsylvania and/or EPA Aquatic Life and/or Human Health Criteria. (Concentrations in ug/L; Hardness assumed to be 78 mg/L).

		PA		EPA	
Pollutant	Ambient Conc.	Chronic	Human	Chronic	Human
Dichloromethane	100				15.7*
1,1-DCE	180; 6		0.06		1.85*
1,2-DCE	3100; 4300; 710; 35; 220; 240; 73; 15	1350	350		1.85*
TCA	1900; 890; 1500	605	1000		
TCE	120; 20; 330; 39; 125; 1200; 410; 170;	450	3		80.7*
Cadmium	3	0.93		0.93	
Chromium	2200	169		169	
Copper	10; 6600; 895; 37	9.6	1000	9.6	
Iron	62500; 7200;	1500		1000	300**
Lead	14800; 1140 170	2.4	50	2.3	50**
Manganese	6240; 230; 507; 371	1000			100*
Zinc	3300; 129; 342; 108	86		86	
Naphthalene	240	43	10		
Ethylbenzene	380000	580	1400		3280*
Toluene	38000	330	14300		
Cyanide	10	5		5.2	
Silver	19.7	0.2		0.12	
1,2-DCA	10		0.4		
Aluminum	21800; 169; 271 936; 415; 145			87	

* 1 in 1,000,000 risk for consumption of fish
** 1 in 1,000,000 rish for water and fish ingestion

Attachment 2

Detection Levels which Exceed Pennsylvania and/or EPA Ambient Water Quality Criteria for Aquatic Life and/or Human Health. (Concentrations in ug/L; Hardness assumed to be 78 mg/L).

Pollutant	Detect. Limits	PA Chronic	PA Human	EPA Chronic	EPA Human
Chloromethane	2; 20		0.2		15.7*
Bromomethane	10; 100		0.2		15.7*
Dichlorodifluoro-methane	50				15.7*
Vinyl chloride	2; 20		0.02		
Trichlorofluoro-methane	50				15.7*
1,2-DCE	1100		350		1.85*
Chloroform	2; 20		0.2		15.7*
1,2-DCA	1		0.4		
Carbontetra-chloride	20				6.94*
Bromodichloro-methane	1; 2; 20		0.2		15.7*
TCE	20		3		
Bromochloro-methane	50				15.7*
1,1,2-TCA	5; 50		0.6		41.8*
Bromoform	10; 100		0.2		15.7*
1,1,2,2-Tetra-chloromethane	10; 100		0.2		
1,1-DCE	1; 10		0.06		1.85*
Arsenic	10				0.0175*
Beryllium	5		0.007		0.0691*
Cadmium	3	0.93	10	0.93	
Mercury	0.5	0.012	0.144	0.012	0.146*
Silver	10	0.2		0.12	

* 1 in 1,000,000 risk for consumption of fish